

CLAIMS**What is Claimed is:**

- 1 1. Device for the closure and/or protection of openings in structures, with
2 vertical closure elements (10) in strip form, which are connected to one
3 another in a hinge-like manner and in such a way that they can be turned
4 about vertical longitudinal central axes (14), and with running carriages
5 (12), which can be made to move on a horizontal running rail (13) and from
6 which at least some closure elements (10) are suspended, characterized in
7 that the running carriages (12) have a bearing body (32) made of plastic,
8 four running wheels (22) made of plastic, mounted on two parallel axes,
9 and a sliding bearing (33) made of plastic and with good emergency
10 running properties, assigned to each running wheel (22).
- 1 2. Device according to Claim 1, characterized in that two of the running
2 wheels (22) respectively lying on each one of the axes are connected by a
3 rotatable bolt (31), the running wheels (22) being fixed on the rotatable bolt
4 (31) and each bolt (31) being mounted in the bearing body (32) by two
5 sliding bearings (33).
- 1 3. Device according to Claim 2, characterized in that the two sliding bearings
2 (33) assigned to each bolt (31) are assigned to opposite lateral edge
3 regions of the respective bearing body (32), preferably in such a way that
4 an outer end face (35) of the respective sliding bearing (33) is exposed to
5 form a stop face for each running wheel (22).
- 1 4. Device according to Claim 1, characterized in that the sliding bearings (33)
2 are arranged substantially completely in corresponding receptacles (34) of
3 the bearing body (32), non-rotatably and non-displaceably.

- 1 5. Device according to Claim 1, characterized in that an underside of the
2 running rail (13) formed in the manner of a box has a continuous
3 longitudinal slot (20), narrow bottom edge strips (18) of the running rail (13)
4 being formed on both sides of the longitudinal slot (20); and the bearing
5 body (32) of the respective running carriage (12) being guided in the
6 longitudinal slot (20).
- 1 6. Device according to Claim 5, characterized in that the lower region of the
2 bearing body (32) of each running carriage (12) that extends through the
3 longitudinal slot (20) of the running rail (13) is assigned at least one guiding
4 roller (39), which can rotate freely about a vertical axis and can be brought
5 into contact, alternating from side to side, with a guiding surface (edge 19)
6 of the running rail (13) delimiting the longitudinal slot (20) on both sides.
- 1 7. Device according to Claim 6, characterized in that the guiding roller (39) of
2 each running carriage (12) is mounted in a freely rotatable manner on a
3 connecting means extending in a vertically directed and central orientation
4 through the bearing body (32), preferably a connecting screw (40), a
5 closure element (10) to which a running carriage (12) is assigned
6 preferably being respectively fastened to the running carriage (12) by the
7 connecting means.
- 1 8. Device according to Claim 5, characterized in that the two bottom edge
2 strips (18) of the running rail (13) are respectively provided with at least one
3 guiding means in a running surface (21) for the running wheels (22), the
4 respective guiding means preferably being formed as a longitudinal groove
5 (42).
- 1 9. Device according to Claim 8, characterized in that the running wheels (22)
2 assigned to the different axes of each running carriage (12) lie as close as
3 possible behind one another, preferably in such a way that longitudinal
4 central planes of the running wheels (22) lying one behind the other lie in a
5 common, vertical plane, which runs centrally through the respective guiding
6 means, in particular the longitudinal groove (42), in each running surface
7 (21) of the bottom edge strip (18).

- 1 10. Device according to Claim 1, characterized in that the diameter of the
2 running wheels (22) of equal size is slightly smaller the spacing between
3 the parallel axes of the running wheels (22).
- 1 11. Device according to Claim 1, characterized in that the diameter of the
2 running wheels (22) or the spacing between the parallel axes on which the
3 running wheels (22) are arranged is smaller than the spacing between the
4 vertical longitudinal central planes of the running wheels (22) on opposite
5 ends of the respective axis, the axial spacing between the opposite running
6 wheels (22) preferably being 0.7 to 0.9 times the diameter of the running
7 wheels (22) or the spacing between the parallel axes.
- 1 12. Device according to Claim 1, characterized in that the sliding bearings (33)
2 are formed from a thermoplastic material with a graphite.
- 1 13. Device according to Claim 1, characterized in that the bearing bodies (32)
2 are formed from high-strength, tough thermoplastic material.
- 1 14. Device according to Claim 1, characterized in that the running wheels (22)
2 are formed from a thermoplastic material which is wear-resistant and
3 causes little running noise.
- 1 15. Device according to Claim 13, characterized in that the thermoplastic
2 material for the bearing bodies (32) is polyamide.
- 1 16. Device according to Claim 14, characterized in that the thermoplastic
2 material for the running wheels (22) is polypropylene.